International Preliminary Examination Report (IPER) Amended Claims

CLAIMS

1) Person identification system characterized by converting fingerprints and genetic codes into barcodes, including these steps:

obtaining a fingerprint by a digital device;

plotting the digital image of a print onto a predetermined alphanumeric two-dimensional grid or stencil in segments with the measurements identified by letters and/or numbers;

classifying the print into one of the possible existing groups;

subclassifying the print according to the classification to which it belongs;

determining the characteristic points of the fingerprint and coding in the alphanumeric information; and

converting the alphanumeric code obtained into barcodes.

2) The person identification procedure according to claim 1, wherein if a person needs to be identified by his DNA, including the following steps:

obtaining the genetic code of a person by any intrusive or non-intrusive method; and

converting the code obtained (alphabetic character chain) into barcodes.

3) The person identification procedure according to claim 1, including the step of linking the barcode obtained to the rest of the person's information.

4) The person identification procedure according to claim 1, wherein the alphanumeric grid is three-dimensional.

5) The person identification procedure according to claim 1, wherein the step for determining the characteristic points of the fingerprint and coding them into alphanumeric information is done taking into consideration the specific square of the grid the characteristic point is found.

6) The person identification procedure according to claim 1, wherein the procedure includes steps prior to inputting the information into the database consisting of the following steps:

completing a form with the personal data and a fingerprint of the person using an organic safety seal that removes the remains of cells attached to the adhesive material of that organic seal;

inputting data from the form into the database and having the system check to make sure that the data has not already been entered, if entered, the software will prevent it from being inputed;

capturing the fingerprint using a digital device and inputing into the database, checking to make sure it has not already been inputed, if entered, the software will check to make sure that the print is linked to the data registered on the form, and if they do not match, it will not allow that print to be inputed into the system;

inputting the genetic code of the person if the DNA analysis has already been done, checking to make sure it has not already been inputed, if entered, the software will check that the genetic code is linked to the data found on the form, and if they do not match, the software will not let that genetic code be inputed;

assuming both the alphanumeric and alphabetic character chains corresponding to the genetic code have not been inputed, they are converted into a barcode; and

printing this barcode that has been obtained on the necessary identity documents.

7) The person identification procedure according to claims 1, wherein this procedure permits checking a person's identity through the following steps:

providing the form with an organic safety seal;

providing a personal identification method with a printed barcode;

reading the barcode printed on the means of identification using a barcode reader;

using the software to bring up on screen all of the information corresponding to the barcode read by the reader;

obtaining the fingerprint of the person using a digital medium;

using the software to generate an alphanumeric character chain and comparing it to the chain corresponding to the print that was previously stored in the database;

wherein if both alphanumeric character chains match, it ends the verification procedure by verifying that it is the same person, otherwise the software will generate a notice reporting that the chains do not match and it is not the same person.

8) The person identification procedure according to claim 1, wherein this procedure lets a person be identified by a fingerprint and involves the following steps:

obtaining a person's fingerprint using a digital medium;

using the software to classify and generate a chain of alphanumeric characters and check whether the chain already exists by comparing it to the chains of that same subgroup that were previously stored in the database;

wherein if the software finds that the chain corresponding to the inputted print, the identification process ends and it is corroborated that it is the same person and the computer brings up on screen the information entered that the operator is requesting, otherwise the software generates a notice informing that the chain of alphanumeric characters obtained is not entered in the database showing that it involves an undocumented person.

9) The person identification procedure according to claim 2, wherein the procedure enables people to be identified by their DNA, and it consists of the following steps:

performing a DNA analysis on the person to be identified using any intrusive or non-intrusive method;

once the genetic code is obtained entering it into the computer system;

using the software to search the database for the alphabetical character chain corresponding to that genetic code and checking to see whether it is already in the system by comparing it to the alphabetic chains previously stored in the database;

wherein if the software finds the chain corresponding to the genetic code entered, the identification process ends, and it is corroborated that it is the same person and information is brought up on screen requested about this person, otherwise the software generates a notice reporting that the alphabetic character

chain of the genetic code is not in the database, which shows that it involves an undocumented person.

10) The person identification procedure, according to claim 6, wherein the fingerprint that is captured digitally is not taken as a whole, but rather is plotted on a two-dimensional grid, and one alphanumeric chain is obtained for each square.

11) The person identification procedure according to claim 6, wherein the three-dimensional method is used to code the full fingerprint from a partial print.

12) The person identification procedure according to claim 1, wherein the two-dimensional grid is variable in the width and height of its rows and columns.

13) The person identification procedure according to claim 6, wherein the search the software performs is based only on certain characteristic points of the alphanumeric code.

14) The person identification procedure according to claim 6, wherein the search the software does is by scanning only certain squares searching out matching points.

15) The person identification procedure, according to claim 6, wherein the search the software performs is done by combining just certain characteristic points of the alphanumeric chain in specific squares.

16) The person identification procedure according to claim 13, wherein from a partial print the software reconstructs the entire print found in matches of specific characteristic points.

17) The person identification procedure according to claim 1, wherein prior to the classification and subclassification steps, there are prior steps comprising a complete dactyloscopic analysis of the whole image of the fingerprnt, said steps involving segmenting the image obtained, dividing the image containing several fingerprints into several separate images each containing a fingerprint are added, and each of them is worked individually according to the following steps:

segmenting each image eliminating the pixels that do not pertain to the print;

improving the image by eliminating noise;

performing a quality analysis of the print, and an determined quality index is obtained, if it is the right one, the image is processed as follows:

searching on the core of the print;

binarizing the image where black pixels represent ridges and white ones the valleys;

calculating the local placement of ridges and valleys;

calculating the general orientation of the print;

configuring the grid and its central point is inserted in the center of the image;

numbering and lettering the grid and each square is assigned a character

graphically displaying the image resulting from inserting the grid onto the fingerprint.

18) The device used in the procedure of claim 1, including a series of devices or apparatus that are interrelated, a digital medium to capture images, a computer containing the information system, a database, a barcode laser reader, and a printer.

19) The device according to claim 18, wherein the database engine can be in a server.